CLAIMS

1. A method for the detection of an angiogenic disease or disorder in an individual comprising the steps of:

   a. isolating platelets from said individual at a first time point;

   b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator;

   c. isolating platelets from said individual at a second time point, said second time point being after said first time point;

   d. analyzing said platelets from said second time point for the level of at least one positive or at least one negative angiogenic regulator; and

   e. comparing the levels of said angiogenic regulator from the first time point to the levels of said angiogenic regulator from said second time point, wherein an increase in the level of said at least one positive angiogenic regulator in the platelets from said second time point or a decrease in at least one negative angiogenic regulator in the platelets from said second time point is indicative of an angiogenic disease or disorder.

2. A method for the detection of cancer in an individual comprising the steps of:

   a. isolating platelets from said individual at a first time point;

   b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator;

   c. isolating platelets from said individual at a second time point, said second time point being after said first time point;

   d. analyzing said platelets from said second time point for the level of at least one positive or at least one negative angiogenic regulator; and

   e. comparing the levels of said angiogenic regulator from said first time point to the levels of said angiogenic regulator from said second time point, wherein an increase in the level of said at least one positive angiogenic regulator in the platelets from said second time point or a decrease in at least one negative angiogenic regulator in the platelets from said second time point is indicative of cancer.

3. A method of treating an individual affected with an angiogenic disease or disorder, comprising the steps of:

a. isolating platelets from said individual at a first time point;

b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator;

c. isolating platelets from said individual at a second time point, said second time point being after said first time point;

d. analyzing said platelets from said second time point for the level of at least one positive or at least one negative angiogenic regulator; and

e. comparing the levels of said angiogenic regulator from the first time point to the levels of said angiogenic regulator from said second time point, wherein an increase in the level of said at least one positive angiogenic regulator in the platelets from said second time point or a decrease in at least one negative angiogenic regulator in the platelets from said second time point is indicative of an angiogenic disease or disorder; and

f. administering a therapy to an individual indicated as having an angiogenic disease or disorder.

4. The method of claim 3, further comprising: (g) isolating platelets from said individual at a third time point, said third time point being after said second time point and after the initiation of therapy; (h) analyzing said platelets from said third time point for the level of at least one positive or at least one negative angiogenic regulator; and (i) comparing the levels of said angiogenic regulator from the second time point to the levels of said angiogenic regulator from said third time point, wherein a decrease in the level of said at least one positive angiogenic regulator in the platelets from said third time point or an increase in at least one negative angiogenic regulator in the platelets from said third time point as compared to the levels in said second time point is indicative of an effective treatment.

5. The method of claim 1, 2, or 3, wherein the platelets are isolated from a blood sample.

6. The method of claim 1, 2, or 3, wherein the positive angiogenic regulator is selected from the group consisting of, VEGF-A (VPC), VEGF-C, bFGF, HGF, angiopoietin-1, PDGF, EGF, IGF-1, IGF BP-3, BDNF, matrix metaloproteinases (MMPs), vitronectin, fibronectin, fibrinogen, heparanase, and sphingosine-1 $PO_4$ .

7. The method of claim 1, 2, or 3, wherein the negative angiogenic regulator is selected from the group consisting of, PF-4, thrombospondin- 1 & 2, NK1, NK2, NK3 fragments of HGF, TGF-beta-1, plasminogen (angiostatin), plasminogen activator inhibitor 1, alpha-2 antiplasmin and fragments thereof, alpha-2 macroglobulin, tissue inhibitors of metaloproteinases (TIMPs),beta-thromboglobulin, edostatin, tumstatin, and solubleVEGFR2.

8. The method of claim 1, 2, or 3, wherein the platelets are analyzed for the presence of at least one angiogenic regulator using a method selected from the group consisting of a protein array, ELISA, Western Blot, surface enhanced laser desorption ionization spectroscopy (SELDI), and Mass Spectrometry.

9. The method of claim 1, 2, or 3, wherein the individual has a genetic predisposition to cancer.

10. The method of claim 9, wherein the genetic predisposition to cancer is a mutation in a tumor suppressor gene.

11. The method of claim 10, wherein the tumor suppressor gene is selected from the group consisting of BRCA1, BRCA2, p53, p10, LKB1, MSH2, and WT1.

12. The method of claim 1, 2, or 3, wherein the individual has been previously treated for cancer or an angiogenic disease or disorder.

13. The method of claim 1, 2, or 3, wherein the individual is believed to be a healthy, disease-free individual.

14. The method of claim 1, 2, or 3, wherein said second time point is at least one month after said first time point.

15. The method of claim 1, 2, or 3, wherein said second time point is at least 2 months after said first time point.

16. The method of claim 1, 2, or 3, wherein said second time point is at least 6 months after said first time point.

17. The method of claim 1, 2, or 3, wherein said second time point is at least 10 months after said first time point.

18. The method of claim 1, 2, or 3, wherein said second time point is at least one year after said first time point.

19. The method of claim 1, 2, or 3, wherein the cancer is selected from the group consisting of gastrointestinal cancer, prostate cancer, ovarian cancer, breast cancer, head and neck cancer, lung cancer, non-small cell lung cancer, cancer of the nervous system, kidney cancer, retina cancer, skin cancer, liver cancer, pancreatic cancer, genital-urinary cancer and bladder cancer.

20. The method of claim 3, wherein said therapy is selected from the group consisting of an angiogenesis inhibitor(s), chemotherapy, radiation, and surgical resection.

21. The method of claim 20, wherein said angiogenesis inhibitor(s) is selected from the group consisting of Angiostatin, Bevacizumab (Avastin), Arresten, Canstatin, Caplostatin, Combretastatin, Endostatin, NM-3, Thrombospondin, Tumstatin, 2-methoxyestradiol, Vitaxin, ZD1839 (Iressa), ZD6474, OSI774 (Tarceva), CI1033, PKI1666, IMC225 (Erbitux), PTK787, SU6668, SU11248, Herceptin, and IFN-α, CELEBREX® (Celecoxib), THALOMID® (Thalidomide), and IFN-α.

22. The method of claim 2 and 3, wherein said angiogenic disease or disorder is selected from the group consisting of retinopathy, diabetic retinopathy, macular degeneration, restenosis, inflammatory disease, arthritis, rheumatoid arthritis, psoriasis, crohns, benign tumors, hemangiomas, neurofibromas and granulomas.

23. A method for the detection of an angiogenic disease or disorder in an individual comprising the steps of:

a. isolating platelets from an individual;

b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator; and

c. comparing the levels of said angiogenic regulator from the individual to the levels of said angiogenic regulators from a standard, wherein an

increase in the level of said at least one positive angiogenic regulator in the platelets from the individual or a decrease in at least one negative angiogenic regulator in the platelets from the individual compared to the standard is indicative of the presence of an angiogenic disease or disorder.

24. The method of claim 23, further comprising administering a therapy to an individual indicated as having an angiogenic disease or disorder.

25. The method of claim 23, wherein the angiogenic disease or disorder is selected from the group consisting of gastrointestinal cancer, prostate cancer, ovarian cancer, breast cancer, head and neck cancer, lung cancer, non-small cell lung cancer, cancer of the nervous system, kidney cancer, retina cancer, skin cancer, liver cancer, pancreatic cancer, genital-urinary cancer, bladder cancer, retinopathy, diabetic retinopathy, macular degeneration, restenosis, inflammatory disease, arthritis, rheumatoid arthritis, psoriasis, crohns, benign tumors, hemangiomas, neurofibromas and granulomas.

26. A method for determining the likelihood of effectiveness of an anti-angiogenic therapy in an individual comprising:

a. isolating platelets from an individual at a first time point;

b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator;

c. administering an antiangiogenic therapy to said individual;

d. isolating platelets from said individual at a second time point, said second time point being after said first time point and after the initiation of therapy;

e. analyzing said platelets from said second time point for the level of at least one positive or at least one negative angiogenic regulator; and

f. comparing the levels of said angiogenic regulator from the first time point to the levels of said angiogenic regulator from said second time point, wherein a decrease in the level of said at least one positive angiogenic regulator in the platelets from said second time point or an

increase in at least one negative angiogenic regulator in the platelets from said second time point is indicative of an effective treatment.

27. A method for determining the effectiveness of a test therapy in modulating levels of platelet angiogenic regulators comprising:

a. isolating platelets from a host at a first time point;

b. analyzing said platelets for the level of at least one positive or at least one negative angiogenic regulator;

c. administering a test therapy to said host;

d. isolating platelets from said host at a second time point, said second time point being after said first time point and after the initiation of the test therapy;

e. analyzing said platelets from said second time point for the level of at least one positive or at least one negative angiogenic regulator; and

f. comparing the levels of said angiogenic regulator from the first time point to the levels of said angiogenic regulator from said second time point, wherein a decrease in the level of said at least one positive angiogenic regulator in the platelets from said second time point or an increase in at least one negative angiogenic regulator in the platelets from said second time point is indicative of the effectiveness of the test therapy in modulating levels of platelet angiogenic regulators.

28. The method of claim 27, further comprising determining which angiogenic regulators are modulated.

29. A method for creating a platelet register or profile for an angiogenic disease or disorder comprising:

a. isolating platelets from two groups of individuals, one group with a known angiogenic disease or disorder (angiogenic group) and a second group without an angiogenic disease or disorder (control group);

b. analyzing said platelets from the angiogenic group and the control group for the levels of platelet-associated biomarkers;

c. calculating the average levels of each platelet-associated biomarker in each group;

d. evaluating the biomarkers in each group to determine the differences; and

e. creating a platelet register for the particular angiogenic disease or disorder, wherein the register is a listing of the biomarkers that are differentially expressed in the angiogenic group as compared to the control group.

30. The method of claim 28, wherein the angiogenic disease or disorder is selected from the group consisting of gastrointestinal cancer, prostate cancer, ovarian cancer, breast cancer, head and neck cancer, lung cancer, non-small cell lung cancer, cancer of the nervous system, kidney cancer, retina cancer, skin cancer, liver cancer, pancreatic cancer, genital-urinary cancer, bladder cancer, retinopathy, diabetic retinopathy, macular degeneration, restenosis, inflammatory disease, arthritis, rheumatoid arthritis, psoriasis, chrohsn, benign tumors, hemangiomas, neurofibromas and granulomas.

31. A method for the detection of an angiogenic disease or disorder in an individual comprising the steps of:

a. isolating platelets from an individual at a first time point;

b. analyzing said platelets for the level of at least one platelet associated biomarker;

c. isolating platelets from said individual at a second time point, said second time point being after said first time point;

d. analyzing said platelets from said second time point for the level of at least one platelet associated biomarker; and

e. comparing the levels of said platelet associated biomarker from the first time point to the levels of said platelet associated biomarker from said second time point, wherein an increase or a decrease in the level of said platelet associated biomarker in the platelets from said second time point indicative of an angiogenic disease or disorder.

32. The method of claim 31, further comprising administering a therapy to an individual indicated as having an angiogenic disease or disorder.

33. The method of claim 31, wherein the angiogenic disease or disorder is selected from the group consisting of gastrointestinal cancer, prostate cancer, ovarian cancer, breast cancer, head and neck cancer, lung cancer, non-small cell lung cancer, cancer of the nervous system, kidney cancer, retina cancer, skin cancer, liver cancer, pancreatic cancer, genital-urinary cancer, bladder cancer, retinopathy, diabetic retinopathy, macular degeneration, restenosis, inflammatory disease, arthritis, rheumatoid arthritis, psoriasis, crohns, benign tumors, hemangiomas, neurofibromas and granulomas.

34. A method for monitoring the effectiveness of a therapy in an individual with an angiogenic disease or disorder being treated with said therapy comprising:

a. isolating platelets from an individual being treated for an angiogenic disease or disorder at a first time point;

b. analyzing said platelets for the level of at least one platelet associated biomarker;

c. isolating platelets from said individual at a second time point, said second time point being after said first time point;

d. analyzing said platelets from said second time point for the level of at least one platelet associated biomarker; and

e. comparing the levels of said platelet associated biomarker from the first time point to the levels of said platelet associated biomarker from said second time point, wherein an increase or a decrease in the level of said platelet associated biomarker in the platelets from said second time point is indicative of an effective therapy.